

**Memorandum of Agreement
to Foster, Implement, and Use
the Hopi Arsenic Mitigation Project ("HAMP")
and the Hopi Public Water System**

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This Memorandum of Agreement is entered into by the Hopi Tribe acting through the Hopi Tribal Council and the Hopi Villages of First Mesa and Mishongnovi, Sipaulovi, and Shungopavi, and the Villages of First Mesa to foster, implement, and use the Hopi Arsenic Mitigation Project ("HAMP") to provide an abundant, high quality domestic water supply to meet water needs of the Hopi Villages and nearby areas served by public federal water systems on an operationally and financially sustainable basis for decades to come. This new using the Hopi Public Water System will be administered by the Hopi Public Utility Authority ("HPUA"). This Memorandum of Agreement ("MOA") shall be known as the "HAMP MOA." This MOA shall also serve to establish a foundation to bring Village water systems operated by the Hopi Villages into compliance with the federal drinking water all Safe Drinking Water Act standards through implementation of HAMP.

PARTIES: This agreement is entered into by:

- the Hopi Tribe ("Tribe") operating through the Hopi Tribal Council;
- the Village of First Mesa (operating through First Mesa Consolidated Villages);
- the Village of Mishongnovi (represented by _____);
- the Village of Sipaulovi (represented by _____); and
- the Village of Shungopavi (represented by _____).

In this MOA Memorandum of Agreement, the four Villages are identified as "Village" and the Villages, together, are identified as "Villages," which when used to identify commitments shall represent the commitment of each individual Village.

MUTUAL UNDERSTANDINGS:

1. —The Tribe and the Villages desire to improve the quality and quantity of potable water available to members of the Tribe and Villages within which they reside and to other residents and water customers of such Villages,

including assuring that water available to the Tribe and Villages meets all applicable federal drinking water quality standards.

2. —The water supplies currently available to the Hopi Villages in the First and Second Mesa areas at First Mesa and Second Mesa do not meet Safe Drinking Water Act national arsenic limitation standards, exceed the federal maximum contaminant level ("MCL") for arsenic, which is 10 micrograms per liter (ug/L).

Commented [BR1]: "exceed USEPA Safe Drinking Water Act maximum contaminant levels (MCLs) for arsenic."

3. —Arsenic is a naturally occurring element in the Southwest. Arsenic often found in potable water that can have serious adverse health effects when consumed long-term in quantities that exceed the arsenic MCL, exceeding existing national water quality standards.

Commented [BR2]: "which exceed the established MCL of 10 parts per billion."

4. The —First Mesa Consolidated Villages and the Villages of Shungopavi and Sipaulovi have entered into Arsenic Compliance Plans agreements with the U.S. Environmental Protection Agency (USEPA) to meet the federal national Safe Drinking Water Act standards for arsenic MCL before the end of January 2015. The Plans indicate the Villages would become part of the HAMP to meet the arsenic MCL, which will require a new source of high-quality water or expensive and technically complex removal of arsenic from local water sources. (Per Bessie – Please remember that the Compliance Plans only applies to arsenic. A public water system still needs to be compliance with all the other 80+ contaminants that are regulated by USEPA.)

Commented [BR3]: "MCL"

5. —The Village of Mishongnovi did not enter into an Arsenic Compliance Plan with USEPA is dependent on the water system managed by the Village of Sipaulovi and its water supply also does not meet the arsenic standards of the Safe Drinking Water Act.

Commented [BR4]: "exceeds the arsenic MCL"

6. —An alternative source of water that will meet the federal MCL for national water quality standards must arsenic must be developed for the Hopi Villages at First and Second Mesa and a distribution system constructed to convey such water to the Villages.

Commented [BR5]: "Safe Drinking Water Act MCL for arsenic"

7. —The Tribe has secured approximately \$5,200,000 in federal grants for identification of such an alternative water supply and for planning, designing,

and development of a water pumping and conveyance system, which is called the Hopi Arsenic Mitigation Project ("HAMP").

8. The Tribe and the Indian Health Service ("IHS") have jointly worked to develop the HAMP, with the IHS Indian Health Service taking the lead in planning, designing, and engineering the HAMP for the Tribe and Hopi Villages and funding the costs of its engineering staff that is working on HAMP.
9. The HAMP is being designed as a system that can provide abundant, high quality water that meets all applicable federal water quality standards and that can deliver this water to Village water systems for use by the Villages in meeting the water needs of the residents of the Villages.
10. Extensive planning, design, and engineering work for the HAMP has already been completed by IHS, and such work by IHS continues with the initial goals being the completion of a final Project Engineering Report and an Environmental Assessment early in 2014. The Project Engineering Report will include overall engineering design, project construction cost estimates, and estimated operating costs. It will address operation and maintenance requirements, location of pipelines and other water system facilities and equipment, and financial viability projections for the HAMP.
11. The latest estimated capital cost of the HAMP is \$21,293,000, of which \$14,349,298 represents the Villages' share of the cost. This amount will be updated as the Project Engineering Report is completed and from time to time thereafter to reflect changes in construction cost indices and actual bid prices for contractual work and system supplies. Update as appropriate.
12. The latest estimated annual operational cost of the Villages' share of HAMP is \$413,801. This amount addresses operation, maintenance, and administration costs of the Hopi Public Water System, including costs of pumping and treating water; costs of equipment, equipment replacements; and HPUA staff; amortization of U.S. Department of Agriculture ("USDA")-Rural Development loan or loans; and required reserves for USDA-Rural Development loan payment, replacement parts, and an emergency fund. This amount will be updated as the Project Engineering Report is completed

Commented [EM6]: I believe this is quite low relative to the costs incurred by WMAT in running the Miner Flat Regional system.

and from time to time thereafter to reflect changes in costs including inflation over time.

13. A source of water for the HAMP has been identified at the Turquoise Trail Wellfield. The wellfield that can provide such an abundant, high quality supply of water, which can be pumped and distributed to the Hopi Villages.

14. The first Turquoise Trail well has been completed with excellent preliminary testing results indicating good quality water (i.e., arsenic levels below the federal MCL for arsenic) including the ability to easily meet Safe Drinking Water Act arsenic standards and to. The well also appears to be able to produce abundant supplies of water. Work is being initiated on the second and final HAMP well. Update as appropriate.

Commented [BR7]: "which are well below the"

Commented [BR8]: "MCL"

15. The HAMP is being designed so that it can also can provide an abundant, high quality water supply system to meet the needs of the Bureau of Indian Affairs ("BIA") and Bureau of Indian Education ("BIE") facilities at Keams Canyon, Hopi Junior-Senior High School, and Second Mesa Day School water systems, including the Indian Health Service housing served by the BIA Keams Canyon water system. The estimated share of the cost of HAMP planning, design, engineering, and construction is \$6,943,702, which includes \$1,587,000 for connecting these BIA and BIE facilities up to the facilities currently being planned for the HAMP. Update as appropriate.

16. The Tribe has secured a commitment for additional funds for the HAMP from the IHS and is working with the Assistant Secretary – Indian Affairs of the Department of the Interior to identify the funding and financing arrangements required to meet the Assistant Secretary's stated commitment to share in the cost of HAMP and to connect to HAMP to provide a high quality source of water to the Keams Canyon, Hopi Junior-Senior High School, and Second Mesa Day School water systems. Update as appropriate. (Per Bessie – A few years ago, there was a discussion about the fact that BIA may need to construct and pay, out of its own pocket, for a pipeline that would connect it to the Polacca water system. This was dependent on where the BIA would connect to the Polacca water system. This was in addition to the cost share for the HAMP. Is this still the case?)

Commented [BR9]: Per Tom H., has this commitment been documented?

17. The financial support of the Bureau of Indian Affairs ("BIA"), Bureau of Indian Education ("BIE"), and IHS, and other potential funding agencies will be critical to the financing of the HAMP. Their funding of and their participation in HAMP the AMP could will reduce the cost of water service to the Villages and help maintain the long-term financial viability of the HAMP.

Commented [EM10]: This is open ended and not well defined.

18. The Hopi Tribal Council has created the Hopi Public Utility Authority (HPUA) to, among other things, construct and operate the Hopi Public Water System ("Hopi Public Water") that will meet all federal ~~na drinking~~ water-quality standards and will provide sufficient water to the Villages to meet their needs for a domestic water supply of water for domestic and commercial uses. (USEPA funds cannot be used for commercial uses.) (Per Bessie – Will the grants be applied for by the Tribe or HPUA?)

19. The HPUA will be seeking loans and additional grants for planning, designing, and implementing ~~ingation of the~~ HAMP, including construction of the Hopi Public Water System, from other federal agencies including USEPA, U.S. Department of Housing and Urban Development, and USDA ~~the Department of Agriculture's~~ Rural Development, ~~IT~~ program, and the federal lending and granting agencies will require that there be arrangements in place to assure that the water from Hopi Public Water System will be received and used by the Hopi Villages and that the water service be paid for by them on a long-term sustainable basis, including paying for the cost of amortizing all loans in the price of water over the 40-year life of such loans.

20. The Federal agencies providing funding for the HAMP will also require that the Tribe and Villages assure the long-term physical and operational sustainability, viability and protection of the Hopi Public Water System.

21. The BIA and BIE systems will also rely in part on USDA Rural Development project loans secured through HPUA, which they will need to separately amortize over the 40-year loan repayment period.

22. The Hopi Tribal Council will also be contributing substantial funding from the Hopi Tribal Council Fund for the HAMP, including for the construction of the Hopi Public Water System.

23. The Villages support the implementation of the HAMP as the best means of providing an abundant source of high quality water to their peoples, institutions, and businesses.

24. The Villages also understand that domestic water received through the HAMP and the resulting Hopi Public Water System will meet all current federal drinking federal water quality standards under the Safe Drinking Water Act and that after connecting to the HAMP, should resolve issues related to Arsenic Compliance Plans agreements they have entered into with USEPA.

Commented [BR11]: "current federal"

25. The Villages agree that such an abundant high quality source of water also should be available to the Keams Canyon, Hopi Junior-Senior High School, and Second Mesa Day School water systems, which serve a large number of Hopi students from the Villages, a number of Hopi homes and workers who provide important services to the Tribe.

26. The Villages recognize the need to make a commitment to implement ~~the~~ HAMP as use of the water from the Hopi Public Water System will be as their future source of domestic water. The Villages recognize the need to ,including making a commitment to pay HPUA for the water service from Hopi Public Water System and to protect the Hopi Public Water System including the route of the Hopi Public Water system pipelines and other components of the Hopi Public Water system. (Per Bessie – I do not understand what the “protect” part of the sentence means. Please clarify.)

COMMITMENTS ON THE PART OF THE TRIBE

The Tribe commits to do the following:

1. ~~-----~~To support the HAMP and do everything in its power to secure financing and support for it;
2. ~~-----~~To work closely with the Villages and the Indian Health Service to complete the planning, design, and implementation of the HAMP;
3. ~~-----~~To provide \$2,000,000 in direct funding for planning, design, construction, and initial operations of the HAMP from the Tribal Council Fund;

4. —To designate and mark such public utility corridors or designate and secure or modify such rights-of-way as are necessary for construction of the Hopi Public Water Ssystem through the HAMP, including consulting with Village leaders ~~on them~~, and, subsequently, such more limited corridors or rights-of-way that are necessary for the operation, maintenance, and repair of the Hopi Public Water Ssystem;

Commented [EM12]: Doesn't state ROW across Village property.

5. —To support HPUA and do everything in its power to assure its long-term operational and financial success including providing initial funding from the Tribal Council Fund to get it staffed and operational until it is financially self-sustaining for each of its operational public utility services; ~~(Per Bessie – Please clarify what “its operational public utility services” means.)~~

6. —To support the Hopi Public Water System and to do everything in its power to assure that HPUA dependably and sustainably delivers high quality potable water that meets all federal drinking water ~~Hopi and national water quality standards (Per Bessie - The Hopi water quality standards are NOT for drinking water; Hopi has no approved drinking water standards.)~~ through the Hopi Public Water Ssystem on a wholesale basis to Hopi Villages and to the BIA and BIE ~~for their facilities at that provide water through the federal Keams Canyon, Hopi Junior-Senior High School, and Second Mesa Day School water systems;~~

Commented [BR13]: Is “Hopi Public Water” a formally established division of the HPUA?

7. —To assure that HPUA maintains the Hopi Public Water Ssystem wells, pipelines, storage tanks, pumps, and any other water-supply related facilities and equipment in good working order and in compliance with all applicable federal drinking water ~~relevant~~ standards;

Commented [BR14]: Safe drinking Water Act

8. —To assure that HPUA enters into fair and appropriate contracts for wholesale water service to the Villages and other HPUA customers through its oversight of HPUA and the Hopi Public Utility Commission ~~(Per Bessie – This is the first mention of the Hopi PUC in this agreement. Is this entity in place? What is its role?)~~ and through providing funding for the Hopi Public Utility Commission from the Tribal Council Fund; ~~(Per Bessie – The Hopi Tribal Council Fund will provide \$2,000,000 to the HAMP. Will the money be going to the HPUA or the Hopi PUC?)~~

9. —Because it will be a wholesaler of water, ~~t~~To assure that HPUA submits the appropriate reports in a timely manner to the ~~reports to the Villages via Consumer Confidence Reports as required by the various rules and regulations of the federal Safe Drinking Water Act (e.g., annual Consumer Confidence Report), the Environmental Protection Agency under the Safe Drinking Water Act; (Per Bessie – There are a lot of other reporting activities required by a water system than just a Consumer Confidence Report.)~~

Commented [BR15]: "reports annually"

10. To assure that HPUA imposes no limitations on the quantity of water or hours of water service provided to the Villages or ~~the BIA and BIE federal water systems of the BIA and BIE served by HPUA unless such restrictions are simultaneously imposed on all water users or restrictions are necessary for the repair and maintenance of the water distribution system; and (Per Bessie – What about drought conditions or when water conservation is necessary?)~~

11. To assure that HPUA indemnifies, saves, and holds harmless each Village or any of its departments, agencies, employees or officers ~~(Per Bessie – What about BIA and BIE?) as to any environmental or other regulatory fines or penalties imposed by USEPA any Tribal or Federal agency including the Environmental Protection Agency or the Hopi Tribal Water Resources Office for violations arising from HPUA's operation of the Hopi Public Wwater Ssystem. (Per Bessie – USEPA is the only entity that has regulatory authority of a public water system on Hopi. Hopi Water Resources Program has water quality standards of waters within the exterior boundaries of the Hopi Reservation, but when it comes to the drinking water systems, it does not have the authority per se in terms of how a public water system is operated.)~~

COMMITMENTS OF THE VILLAGES

The Villages commit to do the following:

12. To support ~~the~~ HAMP and do everything in their power to secure support for it;

13. To work closely with the Tribe, HPUA, IHS, BIA, and BIE to assure the success of ~~the~~ HAMP;

14. To maintain at their own expense and liability the Villages' water distribution system past the Hopi Public Water ~~System's~~ master meter;

15. To negotiate with HPUA contracts for water service ~~from HPUA~~ through the Hopi Public Water ~~system~~System in good faith as details of water service and water fees become available;

16. To promptly and fully pay the contracted ~~for~~ fees for water service from HPUA whether from fees assessed by the Village for its water distribution service to customers or from other funds available to the Village from whatever source that are legally available for the purpose of providing water to customers, including from H3 funds appropriated from the Tribal Council Fund, or a combination thereof; and (Per Bessie – What happens if a village does not pay its fees? Will HPUA develop a Water Code that spells out what will happen to a customer if certain things are not adhered to, like paying fees? Should this policy be stated in this agreement to let the Village know that they will be following/adhering to the conditions in this other document, which has not yet been prepared but will be prepared)?)

Commented [BR16]: Per Tom H., does this reference need to be more clearly defined?

17. To shut off the water supplies from existing wells in the Village and to not commingle the water from them with water supplied by HPUA.

Commented [EM17]: The real issue is for Villages to understand that there will be a significant base rate to cover costs of operating HAMP facilities regardless of how much water they use. This in turn will largely make operation of existing wells for blending purposes financially undesirable.

JOINT COMMITMENTS OF THE TRIBE AND VILLAGES

The Tribe and the Villages commit to do the following:

18. To cooperate with one another and with IHS and HAMP contractors in providing information and ~~all IHS and HAMP contractors~~ the access necessary for the planning, designing, financing, constructiong, and implementingation of the HAMP;

19. To protect utility corridors and/or rights-of-way for the Hopi Public Water System, including keeping them free and clear of obstacles that will thwart their purposes including, initially, such corridors as are required for construction of the ~~Hopi Public Water system~~ through HAMP and,

Commented [BR18]: USEPA-R9 (Bessie Lee) has previously stated that non-arsenic compliant wells must be physically disconnected from the village and/or school distribution systems in order to avoid the requirements (and expense) of annual well source sampling under the SDWA.

subsequently, such more limited corridors that are necessary for the operation, maintenance, and repair of the Hopi Public Water System; and

20. To protect the facilities of the Hopi Public Water System facilities of HPUA, including but not limited to pipelines, storage tanks, meters, measuring and communication devices, pipelines, wells, and pumps, and structures which are necessary to administer, operate and maintain the Hopi Public Water System and to deliver high quality water to the Villages and to the BIA and BIE water systems including for homes for IHS employees served by the Keams Canyon water system.

FURTHER UNDERSTANDINGS OF THE PARTIES

The Parties further agree that:

21. Accommodations will be made to the terms of this agreement for any Village if such Village, at its own discretion, wishes to contract with HPUA to directly operate its water distribution system and an agreement is reached with HPUA for such direct operation; and
22. The ownership, control, and liability for the water distributions systems that are connected to the Hopi Public Water System shall remain the sole responsibility of the respective villages.

APPROVAL OF THE MEMORANDUM OF AGREEMENT

IN WITNESS WHEREOF, this Memorandum of Agreement has been executed by the duly authorized officers of the Parties on the dates shown below their names:

For the Villages and Governments of the First Mesa Consolidated Villages:

[Title]

Dated: _____

For the Village and Government of Mishongnovi:

[Title]

Dated: _____

For the Village and Government of Shungopavi:

[Title]

Dated: _____

For the Village and Government of Sipaulovi:

[Title]

Dated: _____

For the Hopi Tribe:

Chairman, the Hopi Tribe

Dated: _____

The following comments have been proposed for consideration/inclusion in the MOA. Comments in blue were submitted by Adam Hughes/Robert Lorenz. Additional comments in red are from Tom Heintzman. All comments remain un-edited at this time.

- Provision for the HPUA to deliver SDWA compliant water at the master meter, including a chlorine residual
- Minimum pressure and maximum flow rate to be delivered at the master meter by the HPUA
- Acknowledgment that the villages systems will be "consecutive water systems" as defined by the SDWA and will need to comply with the SDWA on their side of the master meter; including: potential need for additional chlorination by the village, village requirements to meet the lead and copper rule (which may require treatment not currently in place)
- Whether the villages be allowed to blend water from their sources
- Acknowledgment by the villages that the HPUA may potentially need to access telemetry located on village water storage tanks, access altitude valve vaults, and access other misc. items after the master meter

- Whether there be requirements placed upon the villages to provide backflow prevention, with or without blending
- Discussion of base and commodity water rates
- Discussion of water rate per gallon – equalized rate (postage stamp rate) – each village and customer to pay the same rate per gallon without regard to location or complexity of HAMP facilities providing water to the customer
- Discussion of setting of water rates, provisions for re-evaluating rates in the future, adjustment of rates by the HPUA, etc.
- Land use concurrence by the village in the form of _____ for the location of HAMP facilities – to include reasonably proximate project maps (see comment below on ROW)
- Acknowledgement by the villages that the HPUA will be periodically entering in and upon village lands for maintenance, management, upkeep, and repair of HPUA facilities – whether or not a formal ROW exists to define the location and boundaries of such facilities Given the Tribe's position on the site control for well drilling, do "village lands" exist? The draft MOA section 4. says the Tribe will consult with village leaders on ROW. It's pretty undefined as written what will be done (designate and mark, or designate and secure, or modify) .
- Acknowledgement that the HAMP design and configuration may undergo revisions/upgrades/improvements in the future, that the HPUA will notify and consult with the villages on land use issues before altering the locations and layouts of HAMP facilities in the future
- Acknowledgement that the HPUA may alter, improve, or refine best management practices in regards to any aspect of the HAMP and its management and that the villages will still be bound by this agreement to participate in the HAMP at a minimum participation level of paying the monthly base rate
- Agreement that no village may opt out of the HAMP once the HAMP is constructed